

**What is claimed is:**

*Sub 637*

1. A device driver apparatus, which is connected to an initiator via a bus, transmitting/receiving signal to/from a process simulating an I/O device, comprising:

5 an adapter transmitting/receiving command or data to/from the initiator via the bus using a predetermined protocol; and

10 a driver, which is arranged between said adapter and a PIO process simulating the I/O device, notifying one or more of the command and the data from said adapter, and also notifying said adapter of one or more of status and data from the PIO process.

15 2. The device driver apparatus according to claim 1, wherein

the predetermined protocol is a SCSI protocol or a protocol into which the SCSI protocol is encapsulated.

20 3. The device driver apparatus according to claim 1 or 2, wherein  
said adapter notifies said driver of command upon receipt of the command from the initiator, said driver notifies the PIO process of the notified command, the

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PIO process returns status being a reply to said driver, said driver notifies said adapter of the status, and said adapter returns the status to the initiator.

5 4. The device driver apparatus according to  
claim 1, 2, or 3, wherein

10 said adapter notifies said driver of command upon  
receipt of the command from the initiator, said driver  
notifies the PIO process of the notified command, the  
PIO process returns a buffer address to said driver after  
preparing data, and setting the data in a buffer, said  
driver sets the buffer address in a register of said  
adapter, and said adapter extracts the data from the  
buffer address set in the register, and transmits the  
extracted data to the initiator.

15 5. The device driver apparatus according to  
claim 1, 2, 3, or 4, wherein

20 said adapter notifies said driver of command upon  
receipt of the command from the initiator, said driver  
notifies the PIO process of the notified command, the  
PIO process prepares a buffer, and returns a buffer  
address to said driver, said driver sets the buffer  
address in a register of said adapter, said adapter  
stores data that is requested of the initiator and

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5 received at the buffer address set in the register, and notifies said driver that the data has been stored, said driver notifies the PIO process that the data has been received, the PIO process extracts the data from the buffer, and returns status being a reply to said driver, said driver sets the status in a register of said adapter, and said adapter returns the status to the initiator.

10 6. The device driver apparatus according to  
claim 1, 2, 3, 4, or 5, wherein

15 said driver is configured by a low-order driver for said adapter, a high-order driver for the PIO process, and a medium-order driver transmitting/receiving a signal between the low-order driver and the high-order driver.

7. The device driver apparatus according to  
claim 1, 2, 3, 4, or 5, wherein

20 the PIO process notifies said adapter or said driver of an error, and said adapter or said driver makes the notified error occur.

8. The device driver apparatus according to  
claim 1, 2, 3, 4, 5, 6, or 7, wherein

25 the PIO process simulates an actual I/O device by

transmitting/receiving status or data of a specified I/O device.

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9. The device driver apparatus according to  
5 claim 1, 2, 3, 4, 5, 6, 7, or 8, wherein

the PIO process simulates an error test of an actual I/O device by making a specified error occur when status or data of a specified I/O device is transmitted or received.

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